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10/825,123	04/16/2004	Arkadiy Morgenshtein	27238	7968

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EXAMINER	
BALL, JOHN C	

ART UNIT	PAPER NUMBER
1795	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/825,123	MORGENSHTEIN ET AL.	
	Examiner	**Art Unit**	
	J. CHRISTOPHER BALL	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 April 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/30/2008*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Summary

1. This Office Action based on the Amendment and Remarks submitted to the Office on April 20, 2008, regarding the MORGENSHTEIN et al. application filed with the Office on April 16, 2004.

2. Claims 1-44 are pending and have been fully considered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 2, 4-30, 33-36, 41, 42, and 44 are rejected under 35 U.S.C. 102(a) as being anticipated by MORGENSHTEIN (A. Morgenshtein, Master of Science in Bio-Medical Engineering Thesis, The Technion—Israel Institute of Technology, Haifa, Israel, April 2003).

MORGENSHTEIN discloses the structure of an ion-selective field effect transistor (ISFET), a type of ion sensitive transistor, (Figure 1, page 4) that is comprised of a solution input (at the ion sensitive layer) , a first reference input (from the reference electrode), a diffusion input (metal contact), and a diffusion output

(other metal contact), which are limitations recited in Claim 1. MORGENSHTEIN also discloses ISFET operation as a pass-transistor (section 8.3, page 74), which also is a limitation recited in Claim 1.

MORGENSHTEIN teaches that when the ISFET is utilized in a pass-transistor mode with the accompaniment of a reference electrode a voltage drop as an electrical signal can be observed (page 74, last paragraph). As shown by MORGENSHTEIN, the threshold drop in voltage can be tracked when utilizing the ISFET with the reference electrode in the manner described (page 75, last paragraph and Figures 54 & 55 on page 76), which is the limitation recited in Claim 2.

MORGENSHTEIN teaches the use of the described ISFET sensor for pH (i.e., hydrogen ion concentration) determination (page 3, first paragraph), which is a limitation recited in Claim 4.

MORGENSHTEIN teaches that an ISFET comprises a chemical sensitive device (page 3, first paragraph), for example an ion sensitive transistor, which is the limitation recited in Claim 5.

MORGENSHTEIN teaches the use of p-type and n-type field effect transistors in the ion concentration sensor (page 75, last paragraph), which are limitations in Claim 6 and 7, respectively.

MORGENSHTEIN teaches application of sinusoidal and triangular pulses, which must come from a pulse source, applied to the diffusion input (page 75, last paragraph, and Figures 54 & 55), which is the limitation recited in Claim 8.

MORGENSHTEIN teaches the application of a square wave, which must be caused by a square wave generator, to the ion concentration sensor (page 74, last paragraph), which is the limitation recited in Claim 9.

MORGENSHTEIN teaches the application of a “Lop [sic] Pass Filter (LPF)”, correctly termed a low pass filter (page 76, bottom paragraph), that is an envelope generator for the electrical signal, which are limitations recited in Claims 10 and 11.

MORGENSHTEIN teaches sampling at a relatively high frequency, beyond the rate that is need for signal recovery in accordance to the Nyquist sampling theorem, which requires pulsed sampling rate be greater than two times the highest frequency of the modulate signal (page 80, first paragraph). The sampling taught in MORGENSHTEIN is higher than the practical frequency of pH fluctuation on the order of 10 Hz (page 79, last paragraph). This is the limitation recited in Claim 12.

MORGENSHTEIN teaches that the square wave modulating the pH signal of the ion concentration sensor can be considered in terms of alternately switching “ones” and “zeros”, relating the modulating pulsed signal as a digital data sequence (first paragraph of section 8.4.4 on page 81), which is the limitation recited in Claim 13.

MORGENSHTEIN teaches the addition of an analog-to-digital converter, a digitizer for converting the electrical signal into digital format, to the ion

concentration sensor (paragraph under section 8.4.1. on page 79), which is the limitation recited in Claims 14 and 15.

MORGENSHTEIN teaches the utilization of a symmetric biasing scheme where a sequence of positive and negative sweeps are applied to the reference electrode (first full paragraph on page 81), inherently implying a sweep generator component comprises the ion concentration sensor, which is the limitation recited in Claim 16.

MORGENSHTEIN teaches the results of applying a negative reference voltage and a positive reference voltage (paragraph beginning at bottom of page 80), inherently implying a voltage source component, to apply such reference voltages to the reference input, comprises the ion concentration sensor, which is the limitation recited in Claim 17.

MORGENSHTEIN teaches a differential structure for body effect elimination where the ISFET is connected with a common MOSFET, the modulating signal is inputted to both devices, and the differentiation performed by a subtractor eliminates the body effect influence as a common mode signal, leaving only as an electrical signal the pH-caused output (first paragraph on page 82). These are the limitations recited in Claim 18.

MORGENSHTEIN teaches the error detector is comprised by a reference transistor with a second reference input, a second diffusion input, a second diffusion output, and is configured as a pass transistor, connected in parallel with the ion sensitive transistor (Figure 59, page 82), which are the limitations recited

in Claim 19. The reference transistor referred to in MORGENSHTEIN (Figure 59, page 82) is a reference field effect transistor (REFET), which is the limitation recited in Claim 20.

MORGENSHTEIN teaches a dual-mode sensor comprising a photodiode that discharges a current which is approximately equal to photocurrent caused by illumination (first paragraph of section 9.2 on page 84), an ion-selective field effect transistor (ISFET), a type of ion sensitive transistor, (Figure 61, page 86) that is comprised of a solution input (at the ion sensitive layer) , a first reference input (from the reference electrode), a diffusion input (metal contact), and a diffusion output (other metal contact), which are limitations recited in Claims 21, 22, and 25. MORGENSHTEIN also teaches a sensor output connected to both the diffusion output of the ISFET and the out of the light sensitive device (Figure 61, page 86), which is a limitation recited in Claim 21. MORGENSHTEIN also discloses ISFET operation as a pass-transistor (first paragraph, section 9.1, page 84) that provides an electrical signal indicating the ion concentration and light intensity (second full paragraph, page 86), which are limitations recited in Claim 21.

MORGENSHTEIN teaches that the transistors in the dual-mode sensor can be n-type or p-type transistors (first full paragraph on page 85), which are limitations recited in Claims 23 and 24.

MORGENSHTEIN teaches a source-drain follower configuration of an ISFET-based ion concentration sensor that is part of the dual-mode sensor that includes

operational amplifiers associated with the sensor output for amplifying the electrical signal (section 4.2, page 24-25, and Figure 7, page 25), which is the limitation recited in Claim 26.

MORGENSHTEIN teaches a dual-mode sensor with a switch associated with an amplifier for connecting and disconnecting the sensor output in accordance with a control signal (element M3, Figure 60, page 85), which is a limitation recited in Claims 27 and 28.

MORGENSHTEIN teaches the application of a “Lop [sic] Pass Filter (LPF)”, correctly termed a low pass filter (page 76, bottom paragraph), that is an envelope generator for the electrical signal, which is the limitations recited in Claim 29.

MORGENSHTEIN teaches that when the ISFET, which is a component in a dual-mode sensor, is utilized in a pass-transistor mode with the accompaniment of a reference electrode a voltage drop as an electrical signal can be observed (page 74, last paragraph). As shown by MORGENSHTEIN, the threshold drop in voltage can be tracked when utilizing the ISFET with the reference electrode in the manner described (page 75, last paragraph and Figures 54 & 55 on page 76), which is the limitation recited in Claim 30.

MORGENSHTEIN teaches use of the dual-mode sensor being utilized in clinical applications a biomedical sensor (section 9.4, page 90), which is the limitation recited in Claim 33.

MORGENSHTEIN teaches the use of the dual-mode sensor for X-ray monitoring and pH measurement in the gastrointestinal tract (section 9.4.2, page 90), which is the limitation recited in Claim 34.

MORGENSHTEIN teaches the use of the dual-mode sensor for sperm mobility measurements, including the processing of a sequence of measured images, implying the component of an image analyzer, and correlating the images with pH measurements, implying the component of a correlator (section 9.4.4, page 91), which are limitations recited in Claim 35.

MORGENSHTEIN does not specifically recite a dual-mode sensor that comprises a cell device for identify cells in accordance with a fluoroscopic tag associated with the cell and pH of the sample, however these limitations that are recited in Claim 36 are aimed at intended use. The components of the dual-mode sensor disclosed by MORGENSHTEIN above that are associated with Claim 21 would inherently be able to perform the recited limitations here, and as such, Claim 36 is rejected.

MORGENSHTEIN teaches the design allowing for implementation of an array-type system with multiple-mode sensing based on the dual-mode sensors (first paragraph, section 9.6, page 93) comprising a photodiode that discharges a current which is approximately equal to photocurrent caused by illumination (first paragraph of section 9.2 on page 84), an ion-selective field effect transistor (ISFET), a type of ion sensitive transistor, (Figure 61, page 86) that is comprised of a solution input (at the ion sensitive layer) , a first reference input (from the

reference electrode), a diffusion input (metal contact), and a diffusion output (other metal contact), which are limitations recited in Claim 41. MORGENSHTEIN also teaches a sensor output connected to both the diffusion output of the ISFET and the out of the light sensitive device (Figure 61, page 86), which is a limitation recited in Claim 41. MORGENSHTEIN also discloses ISFET operation as a pass-transistor (first paragraph, section 9.1, page 84) that provides an electrical signal indicating the ion concentration and light intensity (second full paragraph, page 86), which are limitations recited in Claim 41.

MORGENSHTEIN teaches a dual-mode sensor with a switch associated with an amplifier for connecting and disconnecting the sensor output in accordance with a control signal (element M3, Figure 60, page 85), which is a limitation recited in Claim 42.

MORGENSHTEIN teaches the potential implementation of the pass transistor ISFET into an array-type sensor (first paragraph, section 8.4.6, page 82) comprising an ion-selective field effect transistor (ISFET), a type of ion sensitive transistor, (Figure 1, page 4) that is comprised of a solution input (at the ion sensitive layer) , a first reference input (from the reference electrode), a diffusion input (metal contact), and a diffusion output (other metal contact), which are limitations recited in Claim 44. MORGENSHTEIN also discloses ISFET operation as a pass-transistor (section 8.3, page 74), which also is a limitation recited in Claim 44.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

   1. Determining the scope and contents of the prior art.
   2. Ascertaining the differences between the prior art and the claims at issue.
   3. Resolving the level of ordinary skill in the pertinent art.
   4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over MORGENSHTEIN (A. Morgenshtein, Master of Science in Bio-Medical Engineering Thesis, The Technion—Israel Institute of Technology, Haifa, Israel, April 2003).

MORGENSHTEIN discloses the functioning of an ISFET utilized in a dual-mode sensor in which is shown the measured response. These measured response, for example as those shown in Figures 54 and 55 on page 76, allow for the determination of a rate of change of the sensor output electrical signal, as well as the amplitude drop of the output signal over a single cycle. It is obvious then that a slope measurer and fall detector must be associated with the sensor output to

enable the ability to display what is shown in Figures 54 and 55, which are the limitations recited in Claims 31 and 32.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over MORGENSHTEIN (A. Morgenshtein, Master of Science in Bio-Medical Engineering Thesis, The Technion—Israel Institute of Technology, Haifa, Israel, April 2003) in view of HIRAMOTO et al. (U.S. Patent No. 4,444,644).

MORGENSHTEIN discloses an ion concentration sensor with all the limitations in Claims 1, 2, 4-25, 29, 30, 33-35, 41, and 44 as shown in the 102 rejection above.

MORGENSHTEIN does not specifically teach as a component of the ion concentration sensor an ion concentration calculator that calculates the ion concentration from a voltage drop between the diffusion input and diffusion output.

However, HIRAMOTO et al. discloses a pH electrode using an ISFET with a conventional pH meter, a device well-known in the art configurable to give the calculated ion concentration, wherein the ISFET pH value can be measured from an electrical signal between a source and a drain (i.e., a diffusion input and diffusion output, respectively) (Col. 1, lines 32-41), which are limitations recited in Claim 3.

MORGENSHTEIN and HIRAMOTO et al. are analogous art in that they address the same technology area, ion concentration sensing.

At the time of the present invention, it would have been obvious to one of ordinary skill in the art to combine the ion concentration sensor of MORGENSHTEIN with the teaching of HIRAMOTO et al. to use a pH meter as an ion concentration calculator for the voltage drop between a diffusion input and diffusion output since doing so makes the use of an ISFET fully interchangeable with existing pH detection equipment (HIRAMOTO et al., Col. 2, lines 49-52).

9. Claim 37 - 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over MORGENSHTEIN (A. Morgenshtein, Master of Science in Bio-Medical Engineering Thesis, The Technion—Israel Institute of Technology, Haifa, Israel, April 2003) in view of INDERMUHLE et al. (U.S. Patent No. 6,794,197 B1) and SAWADA et al. (TRANSDUCERS 2003 PROCEEDINGS, 12th International Conference on Solid-State Sensors, Actuators, and Microsystems, PP. 1023-1026).

MORGENSHTEIN teaches a dual-mode sensor comprising a photodiode that discharges a current which is approximately equal to photocurrent caused by illumination (first paragraph of section 9.2 on page 84), an ion-selective field effect transistor (ISFET), a type of ion sensitive transistor, (Figure 61, page 86) that is comprised of a solution input (at the ion sensitive layer) , a first reference input (from the reference electrode), a diffusion input (metal contact), and a diffusion output (other metal contact), which are limitations recited in Claim 37. MORGENSHTEIN also teaches a sensor output connected to both the diffusion

output of the ISFET and the out of the light sensitive device (Figure 61, page 86), which is a limitation recited in Claim 37. MORGENSHTEIN also discloses ISFET operation as a pass-transistor (first paragraph, section 9.1, page 84) that provides an electrical signal indicating the ion concentration and light intensity (second full paragraph, page 86), which are limitations recited in Claim 37. MORGENSHTEIN also discloses implementation of digital signal processing functionality in the form of a single-slope analogue-to-digital converter, a data converter, and a clock modulator (sections 11.3.3 – 11.3.5, pp. 104 – 106), which is the limitation recited in Claim 38.

MORGENSHTEIN does not teach the use of an ion concentration analyzer associated with said at least one dual-mode sensor, for analyzing ion concentration data obtained from said dual-mode sensors; an image analyzer associated with said at least on dual-mode sensor, for analyzing a optical data obtained from said dual-mode sensors; or a correlator associated with said ion concentration analyzer and said image analyzer, for correlating said analyzed ion concentrations with said analyzed images.

However, INDERMUHLE et al. discloses a microdevice and method for detecting a characteristic of a fluid, wherein is taught the use of probe, which can be an ISFET (Col. 11, lines 61-66), that may be coupled to a signal analyzer that analyze the signal derived from ion concentration and therefore the signal analyzer would function as an ion concentration analyzer, which is a limitation

recited in Claim 37. INDERMUHLE et al. also discloses an image analyzer system in the form of a CCD camera connected to a CPU, which is in turn, connected to a VCR and monitor (Col. 12, lines 43-48), which is a limitation recited in Claim 37.

Additionally, SAWADA et al. disclose a fused sensor for photo and ion sensing, wherein is taught the ability to detect the light power and the ion concentration with one sensing part at the same time, and measure the responses without interference (second paragraph, "Fabrications and Characterization" section), which makes the device a correlator of analyzed ion concentrations with analyzed images (see Figure 6), which is a limitation recited in Claim 37.

It would be obvious to one will skill in the art to realize that the input/output ability of the CPU would allow the correlation of analyzed ion concentration and analyzed images provided as external data, including as optical data. These are limitations recited in Claims 39 and 40.

MORGENSHTEIN, INDERMUHLE et al., and SAWADA et al. are analogous art, in that they all deal with the same technical area, analysis of ion concentration with imaging.

At the time of the present invention, it would have been obvious to one with ordinary skill in the art to modify the dual-sensor of MORGENSHTEIN with the ion concentration analyzer and image analyzer of INDERMUHLE et al., and the correlator of SAWADA et al. The analyzers described by INDERMUHLE et al. are particularly well suited for analyzing low volume samples, which allows their

use to rapidly analyze large numbers of samples (INDERMUHLE et al., Col. 1, lines 39-46). The correlating system of SAWADA et al. imparts the ability to simultaneously measure light intensity and ion concentration without either characteristic influencing each others response (SAWADA et al., Abstract).

10. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over MORGENSHTEIN (A. Morgenshtein, Master of Science in Bio-Medical Engineering Thesis, The Technion—Israel Institute of Technology, Haifa, Israel, April 2003) in view of TSUBOSHIMA (U.S. Patent No. 4,332,658).

MORGENSHTEIN discloses an ion concentration sensor with all the limitations in Claims 1, 2, 4-25, 29, 30, 33-35, 41, and 44 as shown in the 102 rejection above.

MORGENSHTEIN does not specifically teach as a component of the sensor array a switching device for controlling switches.

However, TSUBOSHIMA discloses an apparatus for detecting chemical substances that is comprised of a switching control circuit (element 18, Figure 1; and Col. 4, lines 11-15) for the switching of voltages from various ISFETs, which is the limitation recited in Claim 43.

MORGENSHTEIN and TSUBOSHIMA are analogous art in that they address the same technology area, ion concentration sensing.

At the time of the present invention, it would have been obvious to one of ordinary skill in the art to combine the sensor array of MORGENSHTEIN with the switching control circuit of TSUBOSHIMA because doing so allows each

chemically sensitive element in an array to have a adjusted reference bias voltage to maintain each under its optimum operative condition in the course of measurement, increasing accuracy and decreasing measurement time (TSUBOSHIMA, Col. 4, lines 15-25).

Response to Arguments

11. Applicant's arguments, see page 2, filed April 30, 2008, with respect to the specification, in particular the title of the application, have been fully considered and are persuasive. The objection of the specification has been withdrawn.

12. Applicant's arguments, see page 3, filed April 30, 2008, with respect to the drawings have been fully considered and are persuasive. The objection of the drawings has been withdrawn.

13. Applicant's arguments filed April 30, 2008, have been fully considered but they are not persuasive. On page 4 of the submitted Remarks, the representative for the Applicants cites 35 USC 102(d) in an effort to disqualify the MORGENSHTEIN reference from being properly applied as prior art. However, 35 USC 102(d) deals with the application of foreign patent, published foreign patent application, or inventor's certificate as prior art, and the MORGENSHTEIN reference is a Masters Thesis, and not precluded as prior art under 35 USC 102(d). Furthermore, the Remarks and declaration under 37 CFR 1.132 state

the Thesis was “first published on April 27, 2003”, and the author of the Masters Thesis is credited as Arkadiy Morgenshtein, which is different than the inventive entity of the instant application, therefore the MORGENSHTEIN reference qualifies as 102(a) prior art.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. CHRISTOPHER BALL, Ph.D. whose telephone number is (571)270-5119. The examiner can normally be reached on Monday through Thursday, 8:00 am to 5:00 pm (EDT).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nam X Nguyen/
Supervisory Patent Examiner, Art Unit 1753

JCB
AU 1795
07/29/2008